Claim Listing This listing of claims will replace all prior versions and listings of

claims in the application:

1 - 63: (cancelled)

64. (currently amended) ~~An~~ pET-15b expression vector

~~optimized for use in E. coli cells~~ comprising a first

nucleic acid sequence encoding a peptide extension for

enhancing the solubility and proper folding of a protein or

polypeptide of interest, wherein the encoded peptide

extension is selected from the group consisting of: Peptide

T7C (SEQ ID NO: 5), Peptide T7B (SEQ ID NO: 6), Peptide

T7B1 (SEQ ID NO: 7), Peptide T7B2 (SEQ ID NO: 8), Peptide

T7B3 (SEQ ID NO: 9), Peptide T7B5 (SEQ ID NO: 11), Peptide

10   T7B6 (SEQ ID NO: 12), Peptide T7B7 (SEQ ID NO: 13), Peptide

T7B8 (SEQ ID NO: 14), Peptide T7B9 (SEQ ID NO: 15), Peptide

T7B10 (SEQ ID NO: 16), Peptide T7B11 (SEQ ID NO: 17),

Peptide T7B12 (SEQ ID NO: 18), Peptide T7B13 (SEQ ID NO:

19), Peptide T7A1 (SEQ ID NO: 21), Peptide T7A2 (SEQ ID NO:

22), Peptide T7A3 (SEQ ID NO: 23), Peptide T7A4 (SEQ ID NO:

24) and Peptide T7A5 (SEQ ID NO: 25), the expression vector

further comprising a multiple cloning site for inserting,

in-frame with said first nucleic acid sequence, a second

nucleic acid sequence encoding said protein or polypeptide

20   of interest, said protein or polypeptide having a carboxyl- and an amino- terminus~~, is inserted in-frame with said first nucleic acid sequence~~, wherein expression of the first and second nucleic acid sequences yields a fusion protein consisting of the encoded peptide extension fused to the carboxyl-terminus of the protein or polypeptide of interest, and wherein the protein or polypeptide of interest exhibits poor solubility and/or improper folding when expressed in the absence of fusion to said peptide extension.

65 - 100: (cancelled)